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May 9, 1990

Mr. Donn Lipera
Hazardous Materials Specialist
Hazardous Materials Management Division
County of San Diego
Department of Health Services
1700 Pacific Highway
San Diego, CA 92101-2417

2200 Pacific Hwy

Subject: Progress Report
Solar Turbines Incorporated
Harbor Drive Facility
(Release #T00036/H08828)

Dear Mr. Lipera:

This is a Progress Report for Solar's Harbor Drive facility. Enclosed are the revised portions of the Site Assessment Work Plan in response to comments made by you and Mr. Jim Munch (RWQCB) at the February 22, 1990 meeting. Please refer to the March 20, 1990 Progress Report for a detailed description of Solar's formal response to these comments. The following is a description of the changes made to the Site Assessment Work Plan document:

- In response to HMMD comment #1, Solar has increased the number of soil borings to a total of 33. This represents the addition of 12 new soil borings. The appropriate modifications were made to Figure 5-1 and Section 5.0 of the text to reflect these changes.

- In response to HMMD comment #2, Solar has modified Figure 5-1 and the text in Section 5.0 to present the soil boring locations at a scale that more clearly depicts each boring's approximate location relative to the facility's structures and former UST locations. A grid system is now employed and divides the facility into four blocks with three being enlarged to better illustrate the soil boring and piezometer locations. Thus, Figure 5-1 is now divided into four separate figures, 5-1a through 5-1d. Figure 5-1a depicts the facility with the reference grid system superimposed onto it, and serves as a key for the remaining three detail figures. Figures 5-1b through 5-1d are close-up "window" grid blocks for the three areas that contain soil borings and/or piezometers.

- In response to HMMD comment #3, Solar added EPA 418.1 test methodology to the soil sample analyses for those areas suspected of having been exposed to heavy hydrocarbons. Revisions have been made to Table 5-1 and the text in Section 5.0 to reflect these changes.

file
JM
5/14

- In response to HMMD comment #4, Solar has made the appropriate changes to the Site Assessment Task Schedule (Table 11-1) to indicate non-specific months instead of specific weeks. In addition, the task designation "Agency Review" was changed to a subtask ranking under the task heading of "Work Plan." "Response to Comments" was changed to "Solar Response to Comments", and "Authorization to Proceed From Solar" was changed to "Authorization to Commence Work." The appropriate time line was added to the new subtask "Agency Review."

- Other changes to the Work Plan include modifications of Figure 2-2 to correct a typographical error in listing tank numbers DTT1HD and DTT2HD, and modification of Table 2-2A to correct a typographical error in listing tank numbers #230220 and #230221. Also, the Table of Contents was updated to reflect the changes made to Section 5.0.

In preparation for commencement of site assessment activities, the locations of all soil borings and piezometers are being physically identified at the facility, and the required well permits are in the process of being obtained from the County of San Diego, Department of Health Services (SDDHS). In support of these activities, a detailed topographical survey of the property is being performed that will satisfy all applicable 40 CFR and CCR Title 23 regulations pertaining to the planned site assessment.

The next Progress Report will be submitted in early June. Should you have any questions or require more information, please do not hesitate to contact me at 554-5191.

Sincerely,

Robert D. Bush
Manager, Environmental Affairs

cc: Jim Munch, RWQCB
Jim Potter, Cal DHS, Long Beach
Steve Neugebauer, SNR Company

RDB/pl
1345G

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25301 Cabot Road, Suite 212 • Laguna Hills, CA 92653 • (714) 859-9980

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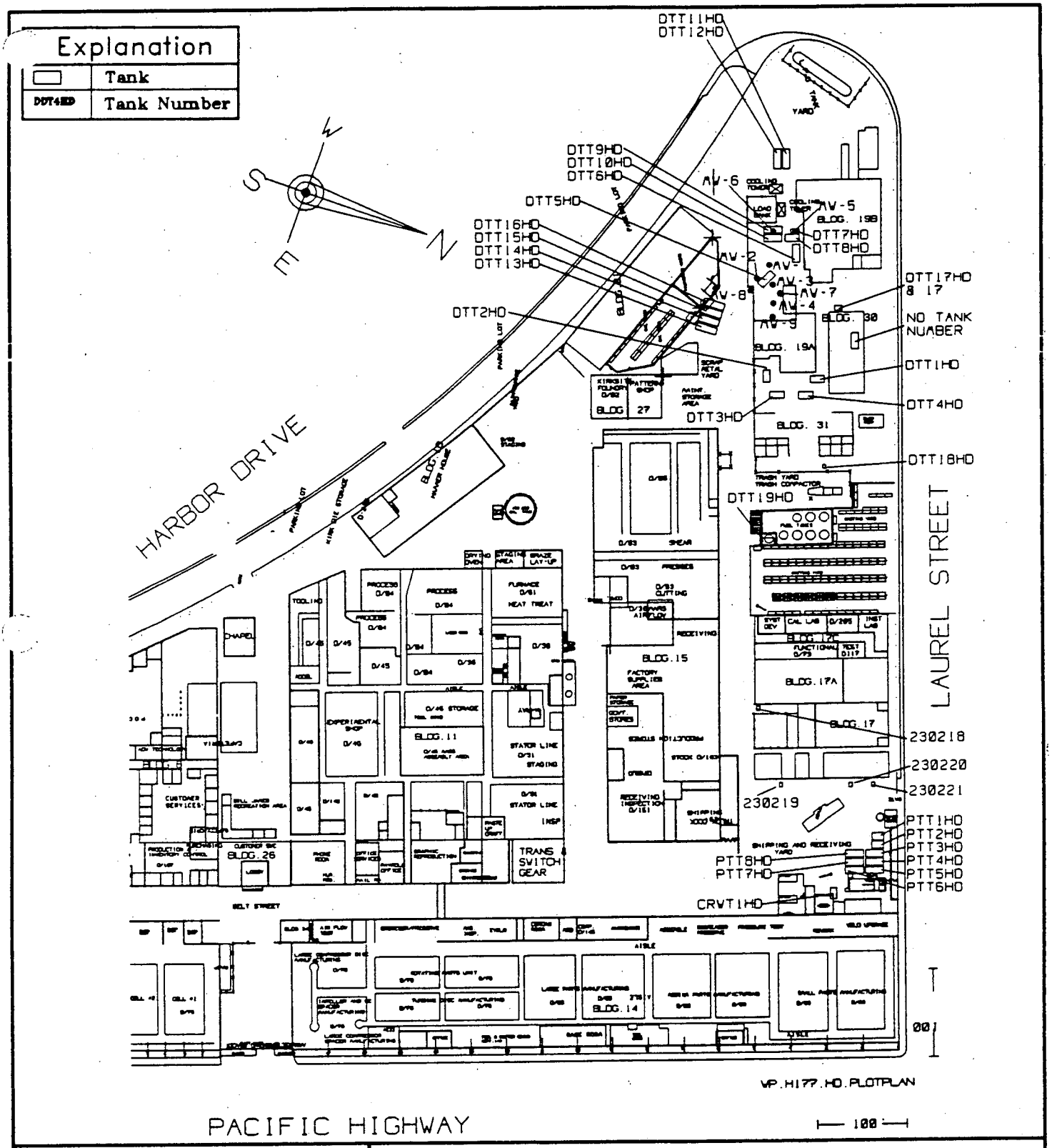


SNR COMPANY Geotechnical & Environmental Consultants	Map Showing Approximate Locations of Underground Storage Tanks	
DRAWN BY: GW		DATE: 05/01/90
CHECKED BY: DS		Figure: 2-2

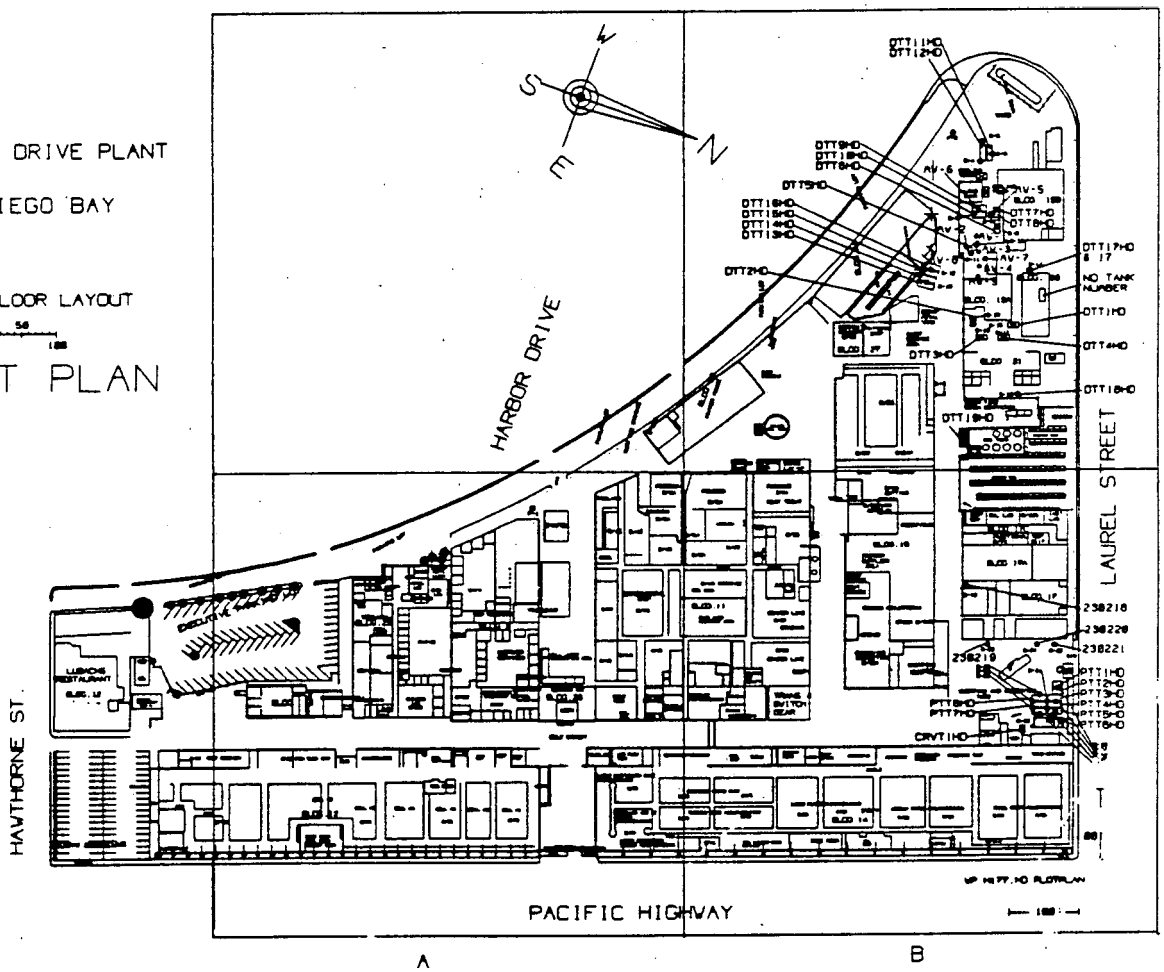
Explanation	
	Tank
DTT4HD	Tank Number

HARBOR DRIVE PLANT

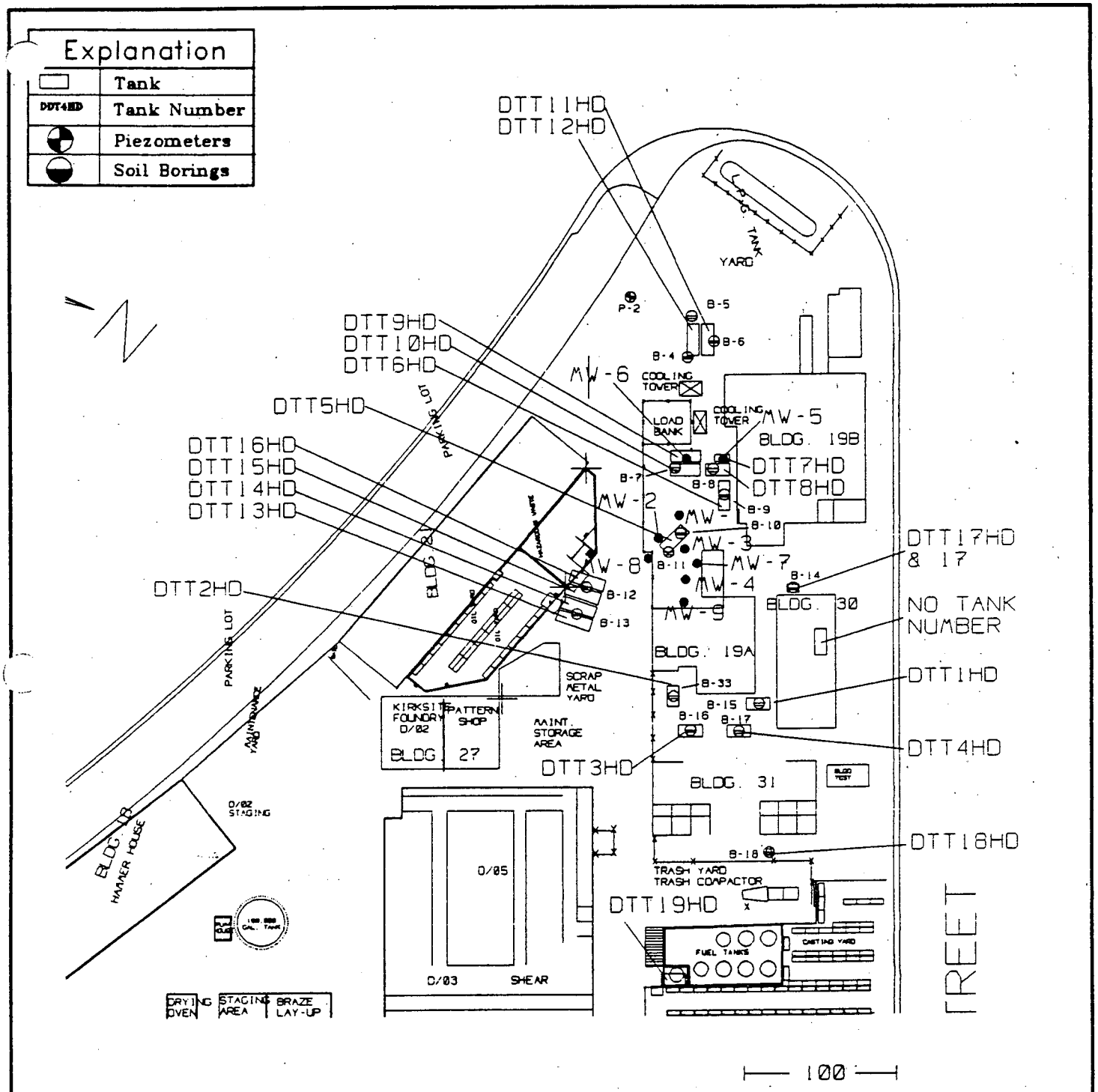
SAN DIEGO BAY

FIRST FLOOR LAYOUT

PLOT PLAN

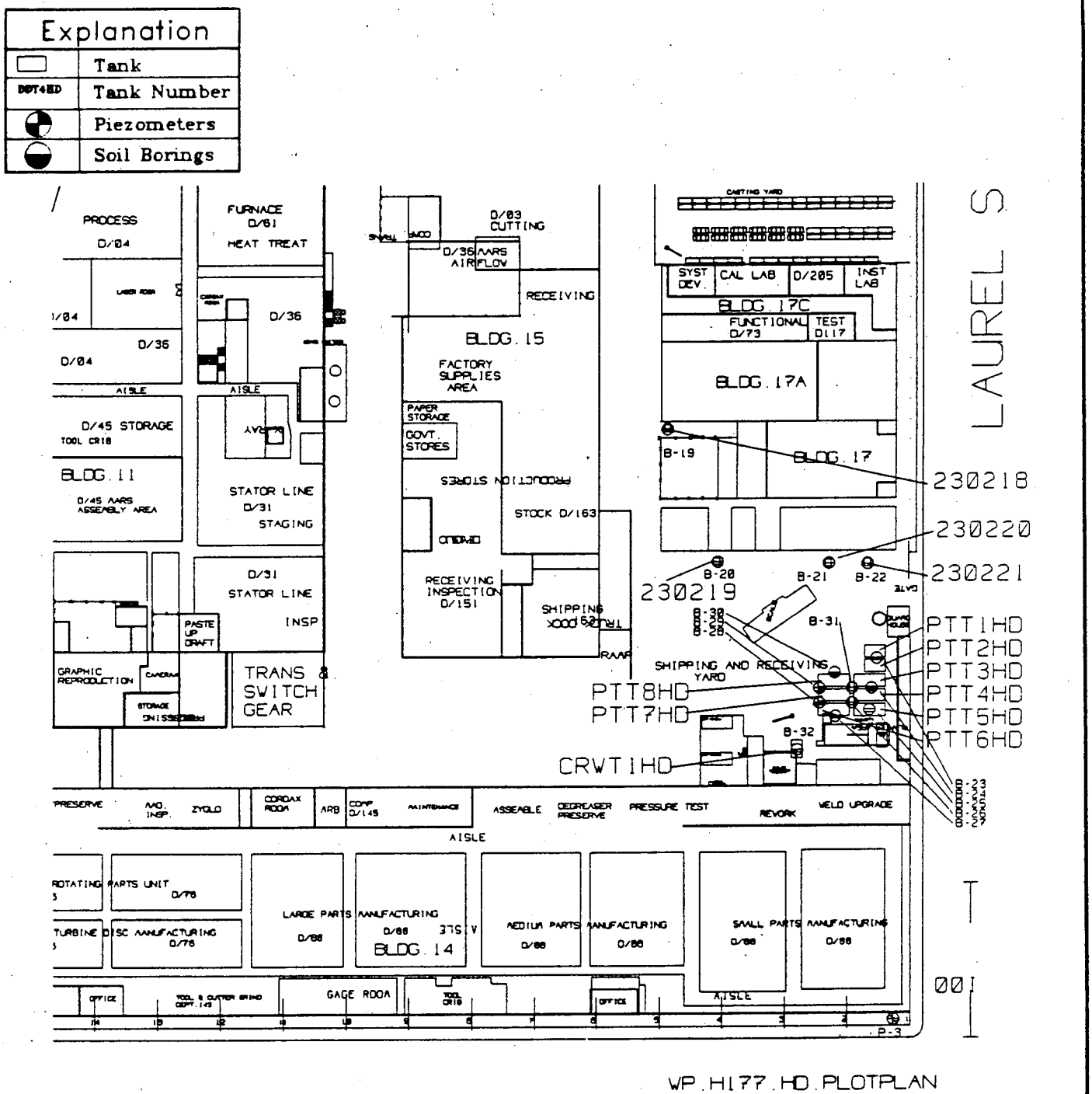


SNR COMPANY Geotechnical & Environmental Consultants	Map Showing Approximate Locations of Soil Borings and Piezometers		
	DRAWN BY: GW		DATE: 05/01/90
	CHECKED BY: DS		Figure: 5-1a



BLOCK 1B

SNR COMPANY Geotechnical & Environmental Consultants	Map Showing Approximate Locations of Soil Borings and Piezometers	
	DRAWN BY: GW	DATE: 05/01/90
	CHECKED BY: DS	Figure: 5-1b

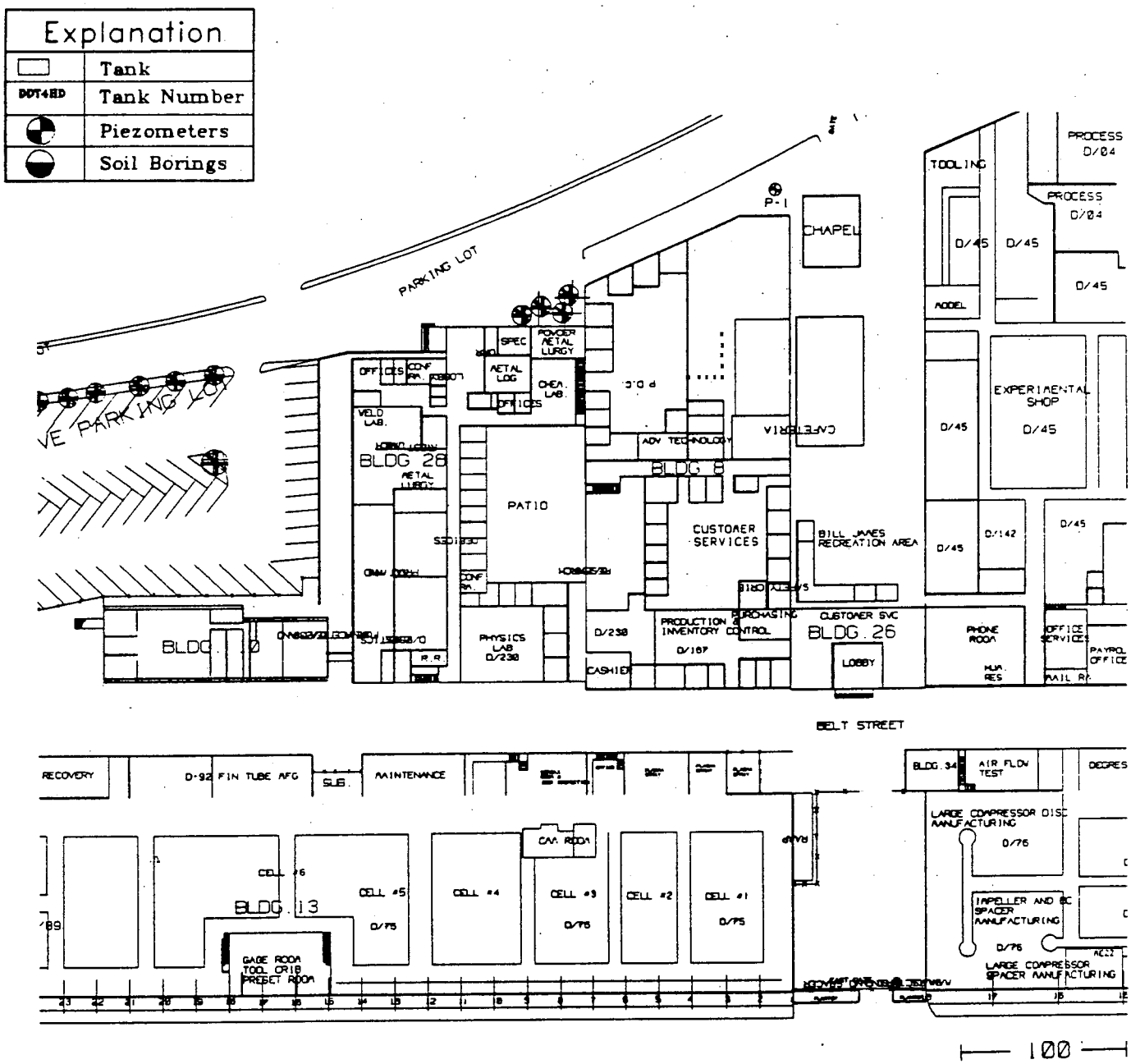


SNR COMPANY

Geotechnical & Environmental Consultants

Map Showing Approximate Locations of Soil Borings and Piezometers

DRAWN BY: GW		DATE: 05/01/90
CHECKED BY: DS		Figure: 5-1c



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BLOCK 2A

SNR COMPANY Geotechnical & Environmental Consultants	Map Showing Approximate Locations of Soil Borings and Piezometers		
	DRAWN BY: GW		DATE: 05/01/90
	CHECKED BY: DS		Figure: 5-1d

TABLE 2-1

SUMMARY OF UNDERGROUND TANK REMOVAL OPERATIONS
SOLAR TURBINES HARBOR DRIVE FACILITY
SAN DIEGO, CALIFORNIA

TANK #	CAPACITY (GALLONS)	CONTENTS	COMMENTS
DTT1HD	1,000	NR	Abandoned in-place (?) near east doorway of Building 19A-1 (Solar in-house engineering records).
DTT2HD	1,000	JP-4	Removed 10/10/80 (WCC,1980a,b). Free product encountered.
DTT3HD	5,000	Jet A	Tank 9 in WCC report (1986), Removed 6/11/86, Permit #AT0133. No evidence of leakage.
DTT4HD	5,000	JP-5	Tank 10 in WCC report (1986), Removed 6/11/86, Permit #AT0133. No evidence of leakage.
DTT5HD	10,000	JP-4	Tank 11 in WCC report (1986); Tank 5 in WCC report (1985a), Removed 6/9/86, Permit #AT0133. Free product encountered.
DTT6HD	5,000	Diesel	Removed 10/10/80 (WCC,1980a,b). Free product encountered.
DTT7HD	3,000	Diesel	Removed 11/8/84 (WCC, 1984). Obvious holes in tank.
DTT8HD	3,000	Diesel	Removed 10/14/80 (WCC,1980a,b). Free product encountered.
DTT9HD	5,000	Jet A	Removed 11/8/84 (WCC, 1984). No evidence of leakage.
DTT10HD	5,000	JP-4	Removed 11/8/84 (WCC, 1984). No evidence of leakage.
DTT11HD	12,000	DF-2	Tank 12 in WCC report(1986) Removed 6/11/86, Permit #AT0133. No evidence of leakage.
DTT12HD	12,000	Diesel	Tank 13 in WCC report (1986) Removed 6/11/89, Permit #AT0133. Obvious holes in tank.
DTT13HD	20,000	DF-2	Removed 5/28/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
DTT14HD	20,000	DF-2	Removed 5/28/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
DTT15HD	20,000	DF-2	Removed 5/28/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
DTT16HD	20,000	Kerosene	Removed 5/28/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
17	220	Mixed	Removed 10/10/80 (WCC, 1980a,b). No evidence of leakage.
DTT17HD	550	Gasoline	Removed 5/29/85 (1985b), Permit #AT0049; Same location as Tank 17A? Some soil staining.
DTT18HD	220	Diesel	Removed 5/29/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
DTT19HD	6,000	TCE/TCA(?)	Reportedly abandoned in-place, filled with sand (WCC 1985d).
NR	NR	NR	Sand-filled tank reportedly located below Building 30 control room (Solar in-house engineering records).
PTT1HD	6,000	Gasoline	Tank 8 in WCC report (1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT2HD	6,000	JP-4	Tank 7 in WCC report (1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT3HD	12,000	Diesel	Tank 6 in WCC report(1986);removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT4HD	12,000	Gasoline	Tank 5 in WCC report (1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT5HD	12,000	Kerosene	Tank 4 in WCC report (1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT6HD	12,000	Kerosene	Tank 1 in WCC report (1986); removed 6/4/86, Permit #AT0133. Obvious holes in tank.
PTT7HD	12,000	Kerosene	Tank 2 in WCC report (1986); removed 6/4/86, Permit #AT0133. Obvious holes in tank.
PTT8HD	12,000	Kerosene	Tank 3 in WCC report (1986); removed 6/4/86, Permit #AT0133. Obvious holes in tank.
CRWT1HD	4,000	Spent Coolant	Tank 14 in WCC report (1986); removed 8/29/86, Permit #AT0133. No evidence of leakage.
230218	280	Lube Oil	Tank 1 in WCC report (1985c); removed 12/9/85, Permit #AT0111. No evidence of leakage.
230219	280	Lube Oil	Tank 2 in WCC report (1985c); removed 12/9/85, permit #AT0111. No evidence of leakage.
230220	280	Lube Oil	Tank 3 in WCC report (1985c); removed 12/9/85, permit #AT0111. Abundant soil staining.
230221	280	Lube Oil	Tank 4 in WCC report (1985c); removed 12/9/85, permit #AT0111. Noted hydrocarbon odor.

Notes:	TANK #	=	Tank Designation Per San Diego County Permit Applications and Solar (1985)
	DF	=	Diesel Fuel
	NR	=	No Records Available At This Time
	WCC	=	Woodward Clyde Consultants
	TCE	=	Trichloroethylene
	TCA	=	Trichloroethane
	Lube Oil	=	Turbine Lubricating Oil
	Permit #	=	County of San Diego Department of Health Services Underground Storage Tank Removal Permit Application Number

TABLE 2-2A

SUMMARY OF PREVIOUS LABORATORY ANALYSIS OF SOIL AND LIQUID SAMPLES
SOLAR TURBINES HARBOR DRIVE FACILITY
SAN DIEGO, CALIFORNIA

Tank	Sample Depth/Type	Sample Number	TPH/TRPH (ppm)	Solvents Detected	Comments
DTT1HD	NA	NA	NA	NA	
DTT2HD	NR/S	10	660	NA	Base of excavation (sidewall)
	NR/S	11	260	NA	6' below excavation
	NR/L	8		Suspected	Free product - Not Diesel
DTT3HD	NA	NA	NA	NA	
DTT4HD	10'/L	SOL-6-11-3		YES	MC, TCA, C, N, P, B, T, E, X
	8.5'/S	SOL-6-11-3	2,545	YES	B,T,X
DTT5HD	10'/L	SOL-6-9-1	NA	YES	PCE, MC, TCA, B, T, X, C, N, P
	9'/SS	SOL-6-9-5	87.57	YES	B,T,X
DTT6HD	NR/S	3	864	NA	Bottom of excavation
	NR/S	4	1210	NA	Botton side wall of excavation
	NR/S	5	109	NA	18 inches above base of excavation (sidewall)
	NR/S	6	852	NA	6 inches below excavation
	NR/S	7	260	NA	Directly below tank
	NR/L	1	35.7	Suspected	Not diesel
	NR/L	2	53.3	NA	
DTT7HD	NR/S	HD-04	19,400	NA	8-10' below grade (sidewall)
	NR/S	HD-05	30,300	NA	8-10' below grade (sidewall)
DTT8HD	6'/S	12	56	NA	Below groundwater table (sidewall)
	NR/S	13	194	NA	Directly below tank
	NR/S	15	123	NA	6 inchess below excavation bottom of tank
	NR/L	14	52.4	NA	Free product
DTT9HD	NR/S	HD-01	51	NA	8-10' below grade (sidewall)
	NR/S	HD-02	1,370	NA	8-10' below grade (sidewall)
DTT10HD	NR/S	HD-03	3,950	NA	8-10' below grade (sidewall)
DTT11HD	11'/L	SOL-6-11-1	542.5/429	YES	MC, TCA, B, E, T, X, C, N
	9'/S	SOL-6-11-2	542	YES	B,T,X
DTT12HD	9'/S	SOL-6-11-2	542	YES	B,T,X
DTT13HD	NR/S	13A	<5	NA	10-14 below grade
	NR/S	13B	5.04	NA	10-14 below grade
DTT14HD	NR/S	14A	2.9	NA	10-14 below grade
	NR/S	14B	379	NA	10-14 below grade
DTT15HD	NR/S	15A	1268	NA	10-14 below grade
	NR/S	15B	24.9	NA	10-14 below grade
DTT16HD	NR/S	16A	13.9	NA	10-14 below grade
	NR/S	16B	1.7	NA	10-14 below grade
17	NR/S	16	522	NA	Base of excavation
	NR/S	17	50.2	NA	6' below excavation
DTT17HD	6.5'/S	17	2,947	NA	Base of excavation
DTT18HD	8'/S	18	1,770	NA	Base of excavation
DTT19HD	NA	NA	NA	NA	

TABLE 2-2A (Continued)

SUMMARY OF PREVIOUS LABORATORY ANALYSIS OF SOIL AND LIQUID SAMPLES
SOLAR TURBINES HARBOR DRIVE FACILITY
SAN DIEGO, CALIFORNIA

Tank	Sample Depth/Type	Sample Number	TPH*/TRPH (ppm)	Solvents Detected	Comments
PTT1HD	10'/L	NA	NA	NO	B,T,E,X
PTT2HD	NA	NA	NA	NA	
PTT3HD	NA	NA	NA	NA	
PTT4HD	NA	NA	NA	NA	
PTT5HD	10.5'/L	SOL-5-30-1	NA	YES	B, T, E, X, N, A, Pb
PTT6HD	10.5'/L	SOL-6-4-1	NA	YES	E, T, X, Pb
PTT7HD	NA	NA	NA	NA	
PTT8HD	9'/S	SOL-6-4-7	NA	NO	B,T,E,X
CRWT1HD	9.5'/S	SHD-BOT-2	NA	YES	BBP, BP, D, HCB, TCE, DBCM, DCP, H
230218	NR/S	T1-1	1,119	YES	PCE, TCE
	NR/S	T1-2	907	YES	PCE, TCE
	NR/S	T1-3	1,828	YES	PCE, TCE, TCA, C
	NR/S	SHD-TF1	49.9*	YES	PCE, TCE, TCA, MC
230219	NR/S	T2-1	618	YES	PCE, TCE
	NR/S	T2-2	136	YES	PCE, TCE
	NR/S	T2-3	1,070	YES	PCE, TCE, TCA
	NR/S	SHD-TF2	45.1	YES	PCE, TCE, TCA, MC, X
230220	NR/S	T3-1	18	YES	PCE
230221	NR/S	T4-1	165	YES	PCE, TCE, TCA, C

NA	Not Analysed
NR	Not Reported
B,T,E,X	Benzene, Toluene, Ethylbenzene, Xylenes
PCE	Tetrachloroethylene
TCE	Trichloroethylene
TCA	Trichloroethane
MC	Methylene Chloride
TPH	Total Petroleum Hydrocarbons
TRPH	Total Recoverable Hydrocarbons
C	Chloroform
BBP	Benzyl Butyl Phthalate
BP	Bis (2-ethylhenyl) Phthalate
D	2,4 Dinitrotoulene
HCB	Hexachlorobenzene
DBMC	Dibromochloromethane
L	Liquid Sample
S	Soil Sample
DCP	cis 1,3 Dichloropropene
N	Napthalene
P	Phenanthrene
A	Acenaphthylene

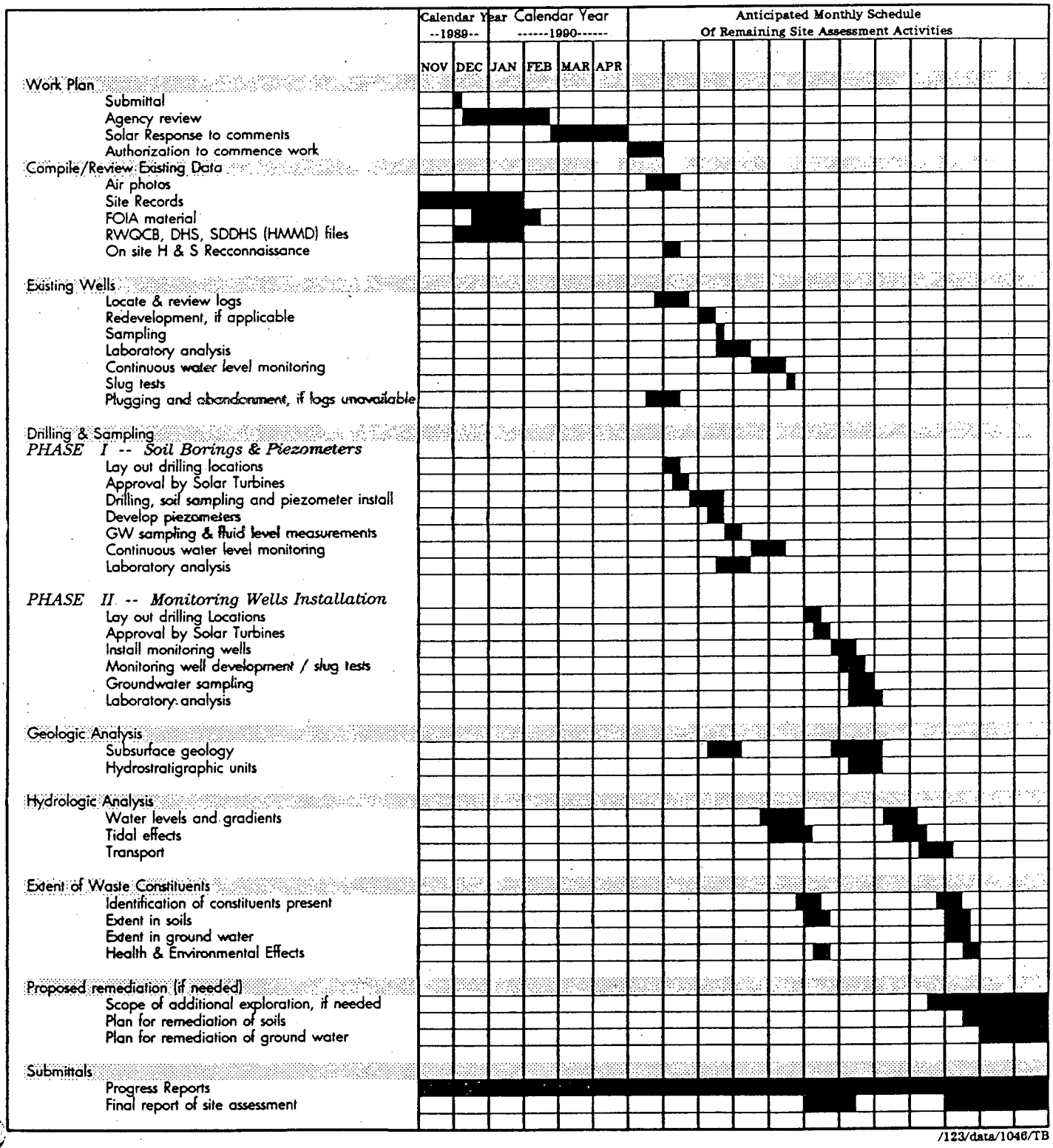
TABLE 5-1
Laboratory Methods and Action Levels

Compound	SW-846 Method	CA DHS Action Levels For Drinking Water (mg/L)	Proposed EPA TCLP Levels	CA STLC mg/L	CA TTLC mg/kg
Antimony	6010			15	500
Arsenic	7060		5.0	5.0	500
Barium	6010		100	100	10,000
Beryllium	6010			0.75	75
Cadmium	6010		1.0	1.0	100
Chromium	6010		5.0	560	2500
Chromium VI	7195,7196,or7197			5	500
Cobalt	6010			80	8,000
Copper	6010			25	2,500
Fluoride	6010			180	18,000
Lead (Inorganic)	6010		5.0	5.0	1,000
Mercury	7470/7471		0.2	0.2	20
Molybdenum	6010			350	3,500
Nickel	6010			20	2,000
Selenium	7740		1.0	1.0	100
Silver	6010		5.0	5	500
Thallium	7841			7.0	700
Vanadium	6010			24	2,400
Zinc	6010			250	5,000
Total Petroleum Hydrocarbon	8015/418.1				
Benzene	624/8240	0.0007	0.07		
Toluene	624/8240	0.10	14.4		
Ethyl Benzene	624/8240	0.68			
Xylenes	624/8240	0.62			
Methlylene Chloride	624/8240	0.040	8.6		
Chloroform	624/8240		0.07		
Tetrachloroethylene	624/8240	0.004	0.1		
Trichloroethene	624/8240	0.005	0.07		
Trichloroethane	624/8240	0.200	25		
Dibromochloromethane	624/8240				
cis 1,3 Dichloropropene	624/8240				
Napthalene	625/8270				
Acenaphthylene	625/8270				
Benzyl Butyl Phthalate	625/8270				
Bis (2 ethylhexyl) Phthalate	625/8270				
2,4 Dinitrotoluene	625/8270		0.13		
Hexachlorobenzene	625/8270		0.13		
Heptachlor	625/8270				

TABLE 11-1

SITE ASSESSMENT WORK PLAN
SOLAR TURBINES HARBOR DRIVE FACILITY
SAN DIEGO, CALIFORNIA

TASKS - SCHEDULE



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